NWS Form E-5 (04-2006) (PRES. BY NWS Instruction 10-924)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) Burlington VT
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH: July YEAR: 2012
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE: /s/ Gregory A. Hanson, SH WFO BTV DATE: August 13 2012

When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).

☐ An X inside this box indicates that no flooding occurred within this hydrologic service area.

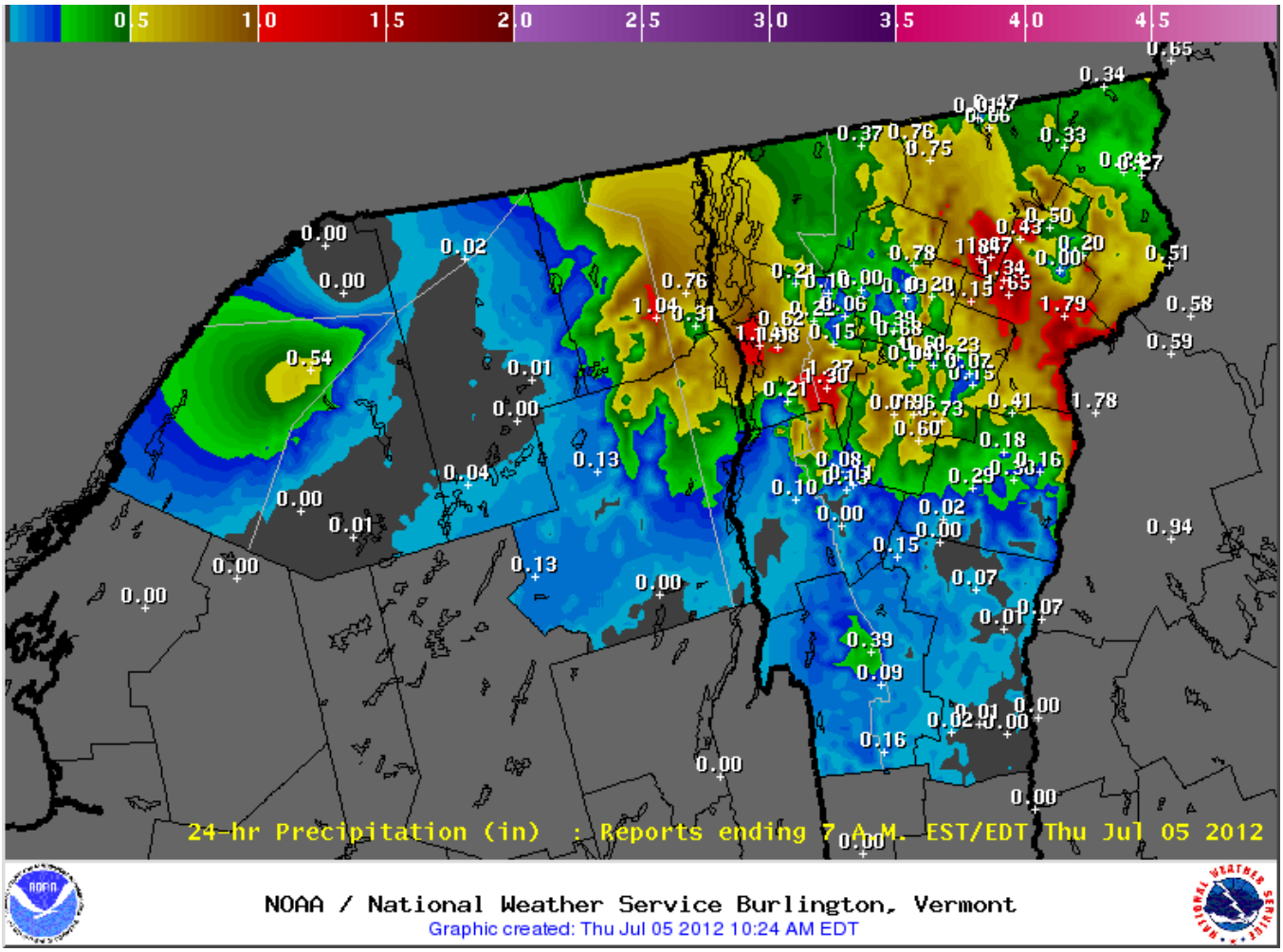
July was a dry month with the WFO Burlington Hydrologic Service Area (HSA) on the periphery of a large, hot region of high pressure over the central US. The region was under a warm humid air mass for much of the month, although northwest flow aloft provided for periodic cold fronts which touched off showers and thunderstorms. Despite the overall lack of rain, there were some periods of heavy rainfall, with localized urban flooding. River flows were mostly in the 25th percentile or lower of normal flow, and because of the dry antecedent conditions saw only minor rises from the rainfall.

On July 4 strong to severe thunderstorms developed in warm humid air, and travelled northwest to southeast in northwest flow aloft. A swath of over an inch of rain fell in the northern Champlain Valley, as well as in the Northeast Kingdom of Vermont (Figure 1). Most of the rain fell in a very short amount of time, and Burlington Vermont experienced urban flooding as a result. Storm drains were overwhelmed, and some storefronts in the downtown area had flooded basements or main floor flooding. Water quickly receded as the storms passed. No other flood impacts were reported, and impacted river basins saw rises of only one to two feet.

A cold front moved through the HSA on July 17, touching off strong to severe showers and thunderstorms. Northern New York saw the most rainfall from this event, with 1 to 2 inches of rain in the northern Adirondacks. Vermont saw an inch or less. (Figure 2) Because nearly two weeks had elapsed since the previous significant rain, rivers had returned to abnormally low levels and the antecedent conditions were very dry. As a result rivers responded with only small rises.

The final rain event for July was on July 23. Similar to the previous two rain events, scattered strong to severe storms developed in northwest flow and produced locally heavy rainfall (Figure 3). There was no flooding, and rivers rose a foot or two.

Some locations received above normal rainfall during the month, but overall the region was 1.02 inch below normal (Figures 4 & 5). Between the rainfall events the region flirted with Abnormally Dry (D0) category of the U.S. Drought Monitor (Figure 6). Overall there were no drought impacts and water supply was not an issue.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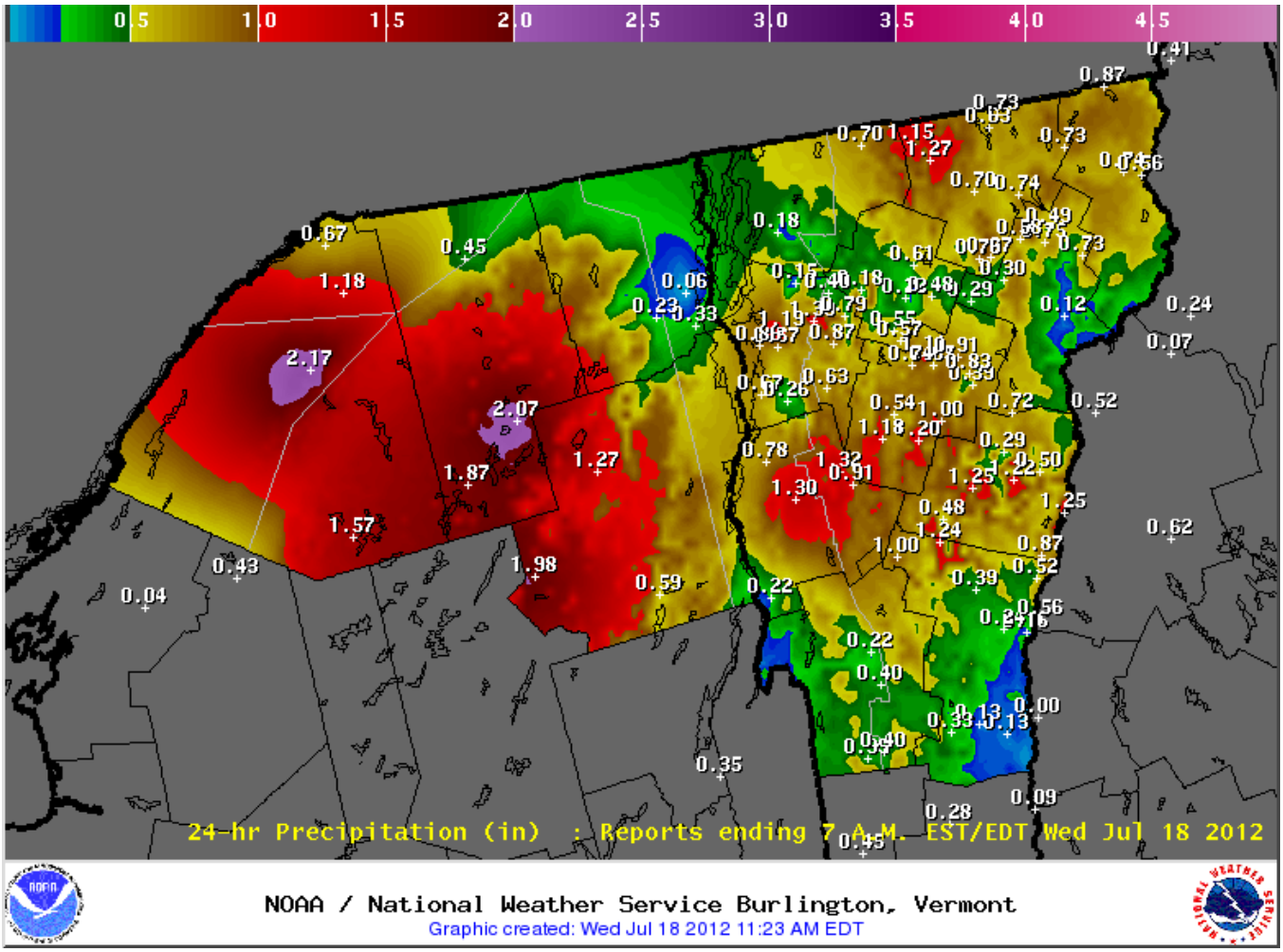
24-hr Precipitation (in) : Reports ending 7 A.M. EST/EDT Thu Jul 05 2012
NOAA / National Weather Service Burlington, Vermont
Graphic created: Thu Jul 05 2012 10:24 AM EDT

Figure 1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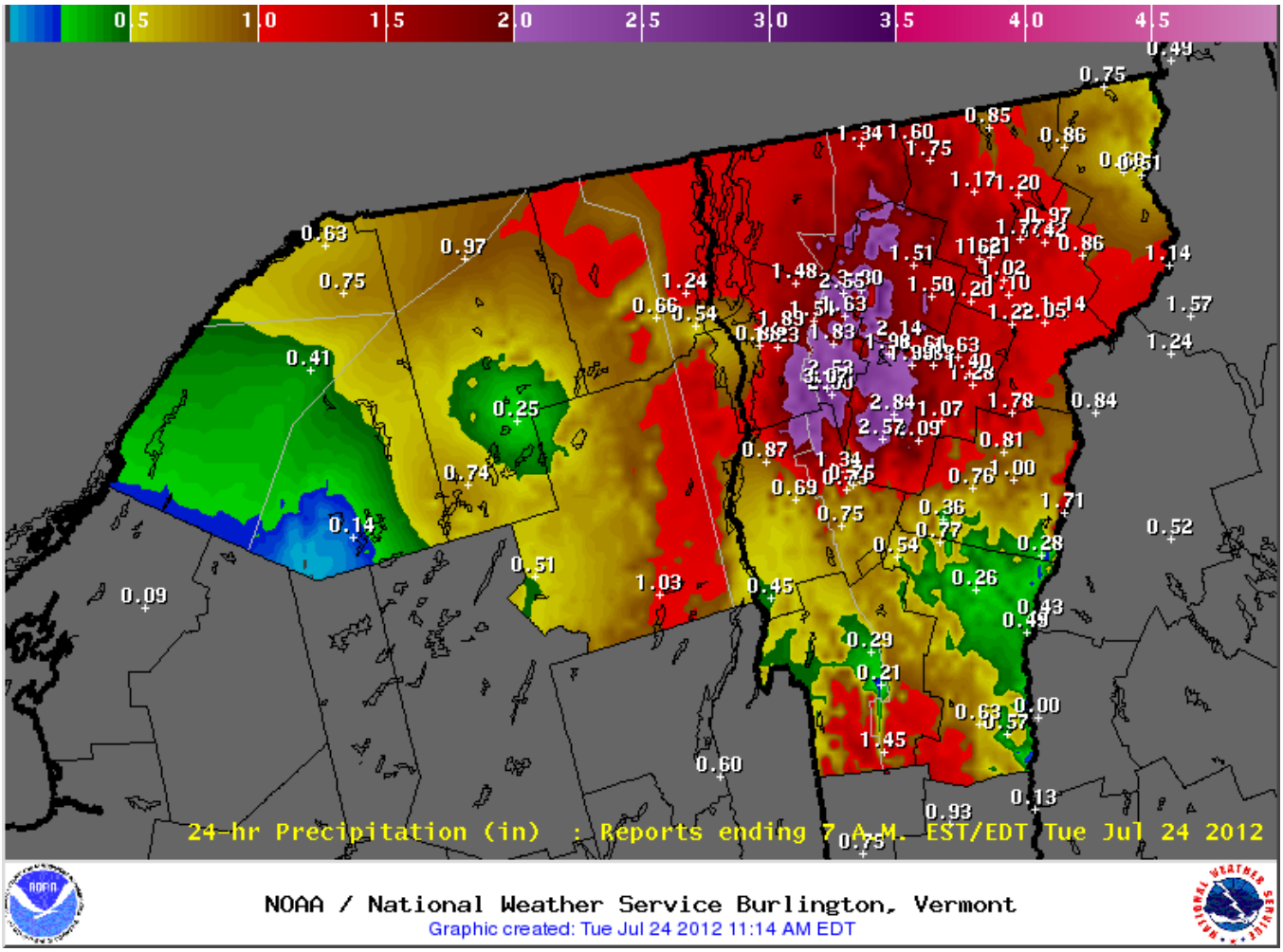
24-hr Precipitation (in) : Reports ending 7 A.M. EST/EDT Wed Jul 18 2012
NOAA / National Weather Service Burlington, Vermont
Graphic created: Wed Jul 18 2012 11:23 AM EDT

Figure 2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24-hr Precipitation (in) : Reports ending 7 A.M. EST/EDT Tue Jul 24 2012
NOAA / National Weather Service Burlington, Vermont
Graphic created: Tue Jul 24 2012 11:14 AM EDT

Figure 3

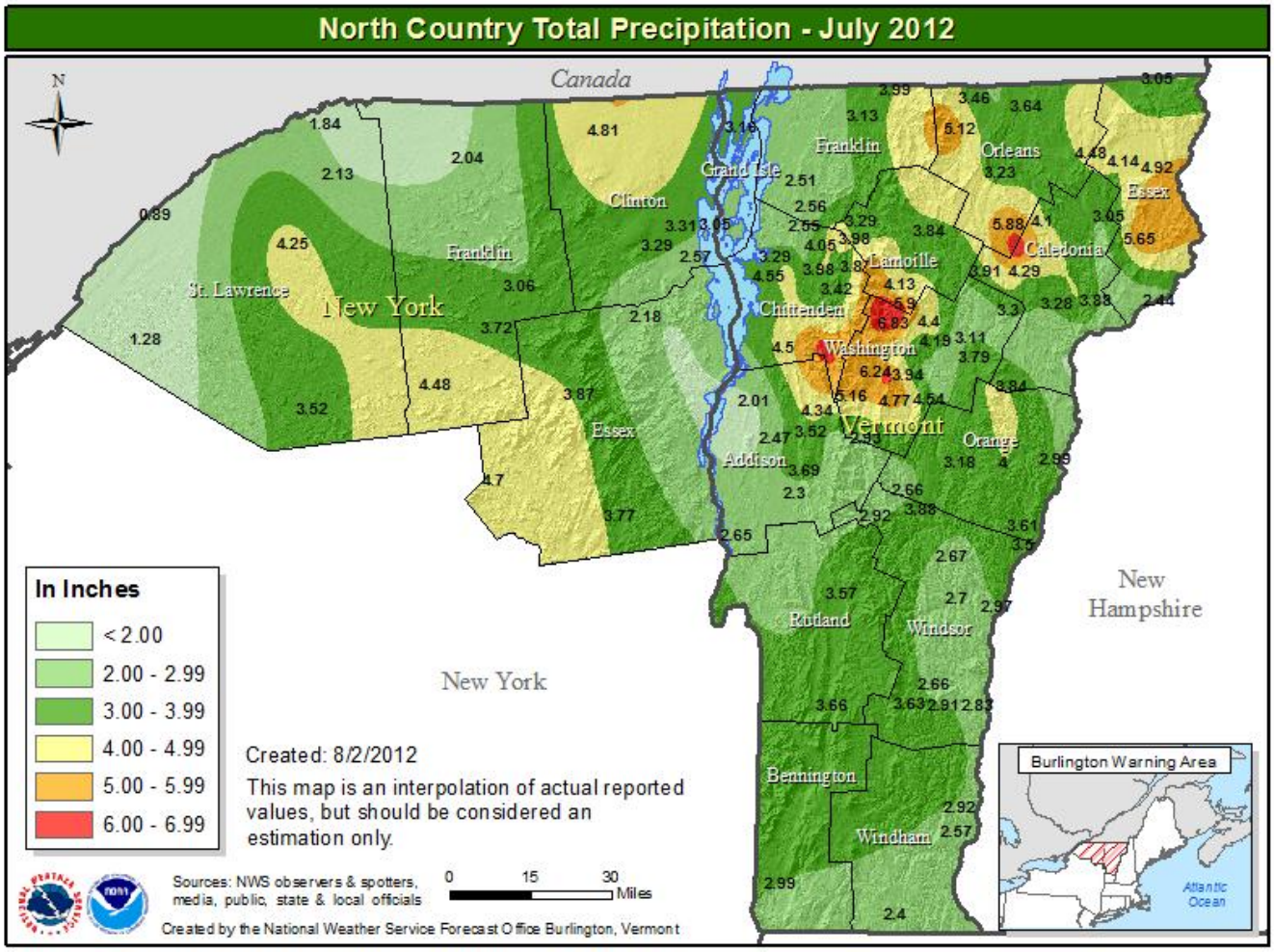

North Country Total Precipitation - July 2012
Canada
New York
Vermont
New Hampshire
New York
Franklin
Clinton
Grand Isle
Orleans
Essex
Caledonia
Lamoille
Chittenden
Washington
Addison
Orange
Rutland
Windsor
Bennington
Windham
St. Lawrence
Essex
Franklin
In Inches
< 2.00
2.00 - 2.99
3.00 - 3.99
4.00 - 4.99
5.00 - 5.99
6.00 - 6.99
Created: 8/2/2012
This map is an interpolation of actual reported values, but should be considered an estimation only.
Sources: NWS observers & spotters, media, public, state & local officials
0 15 30 Miles
Created by the National Weather Service Forecast Office Burlington, Vermont
Burlington Warning Area
Atlantic Ocean

Figure 4

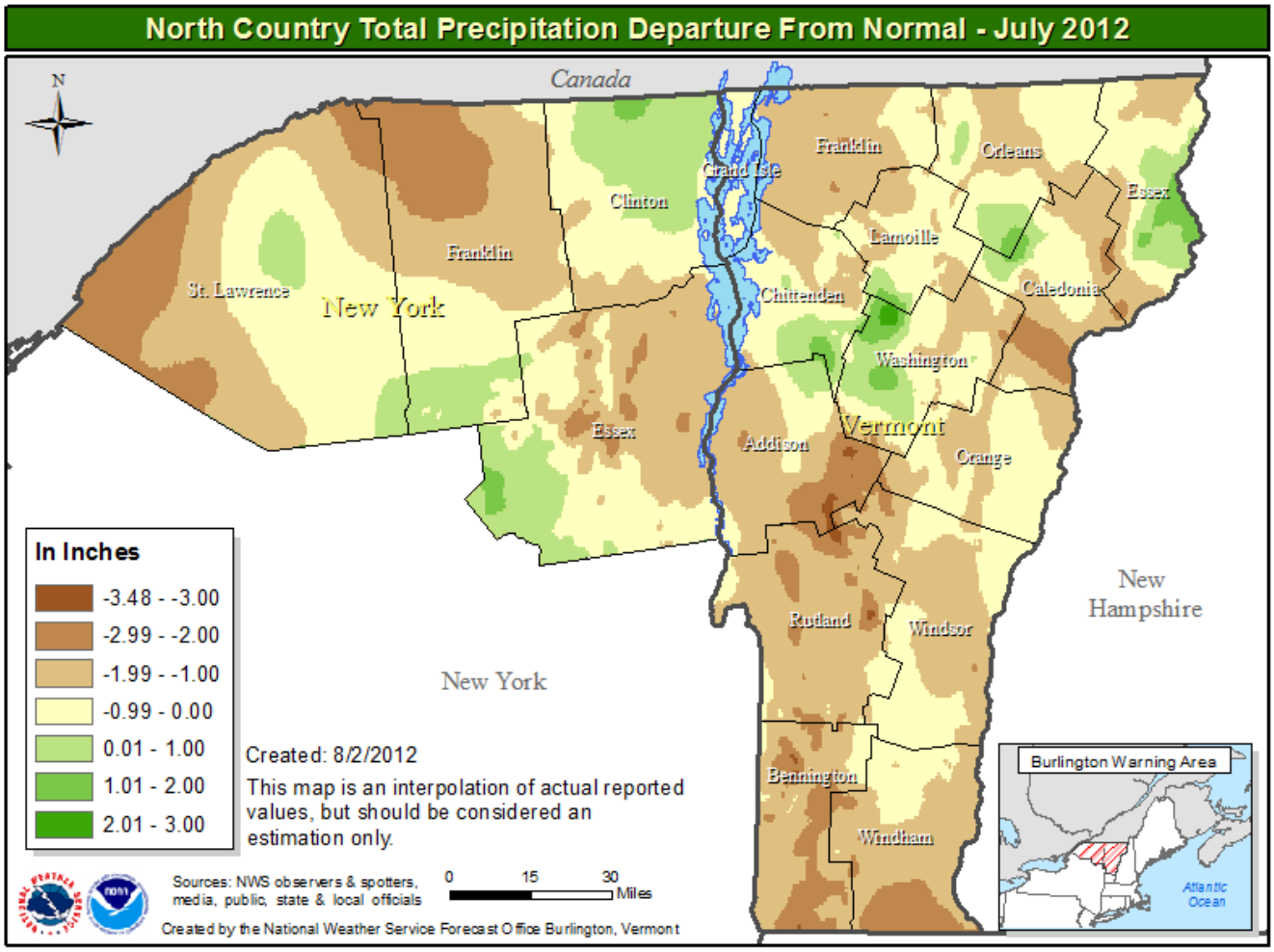

North Country Total Precipitation Departure From Normal - July 2012
N
Canada
Grand Isle
Franklin
Orleans
Essex
Clinton
Lamoille
Franklin
St. Lawrence
New York
Chittenden
Caledonia
Washington
Essex
Addison
Vermont
Orange
New Hampshire
Rutland
Windsor
New York
Bennington
Windham
Burlington Warning Area
Atlantic Ocean
In Inches
-3.48 - -3.00
-2.99 - -2.00
-1.99 - -1.00
-0.99 - 0.00
0.01 - 1.00
1.01 - 2.00
2.01 - 3.00
Created: 8/2/2012
This map is an interpolation of actual reported values, but should be considered an estimation only.
Sources: NWS observers & spotters, media, public, state & local officials
0 15 30 Miles
Created by the National Weather Service Forecast Office Burlington, Vermont

Figure 5

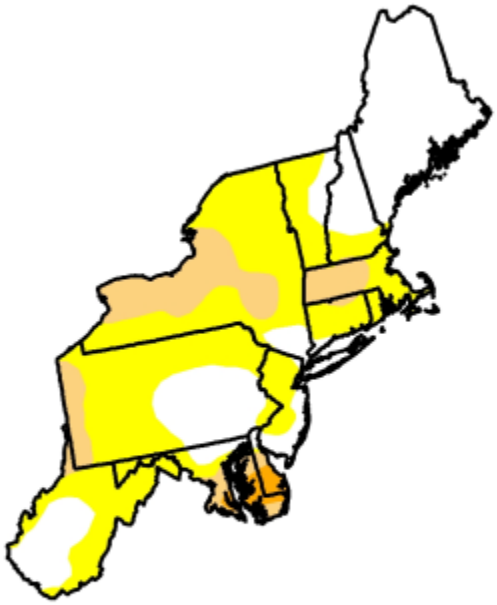
U.S. Drought Monitor

July 24, 2012
Valid 7 a.m. EST

Northeast

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	36.64	63.36	16.17	1.56	0.00	0.00
Last Week (07/17/2012 map)	34.04	65.96	15.05	0.33	0.00	0.00
3 Months Ago (04/24/2012 map)	35.89	64.11	25.96	4.07	0.00	0.00
Start of Calendar Year (12/27/2011 map)	96.69	3.31	0.00	0.00	0.00	0.00
Start of Water Year (09/27/2011 map)	97.24	2.76	0.00	0.00	0.00	0.00
One Year Ago (07/19/2011 map)	79.86	20.14	1.69	0.37	0.00	0.00



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu

USDA National Drought Mitigation Center

Released Thursday, July 26, 2012
Richard Heim, National Climatic Data Center, NOAA

Figure 6

Significant River Crests
July 2011
WFO Burlington VT

-none-